

A Study to Assess the Effectiveness of Information Booklet Regarding First Aid Management Among High School Students in Selected School of Jabalpur

Ms. Asmita Mishra¹, Prof. Mrs. Surbhi R. Kehari², Prof. Dr. Princey Shaji³

¹*M.Sc.(N) Final Year, Child Health Nursing, Jabalpur Institute of Nursing Sciences and Research Jabalpur, M.P.*

²*Guide, Child Health Nursing, Jabalpur Institute of Nursing Sciences and Research Jabalpur, M.P.*

³*Research Coordinator, Obstetrics and Gynecology Nursing, Jabalpur Institute of Nursing Sciences and Research Jabalpur, M.P.*

Abstract—Aim: To Assess the Effectiveness of Information Booklet Regarding First Aid Management Among High School Students in Selected School of Jabalpur

Objectives: The objectives of the study were to assess pre-test and post-test knowledge regarding first aid management among high school students, determine the effectiveness of an information booklet, and find the association between pre-test knowledge and selected demographic variables.

Methodology: A pre-experimental one-group pre-test and post-test design was used. The study was conducted among 60 students of 11th and 12th standard in a selected school of Jabalpur. Data were collected using a structured knowledge questionnaire. After the pre-test, an information booklet on first aid management was provided, and a post-test was conducted after two weeks.

Result: The findings revealed that in the pre-test, 65% of students had poor knowledge and 35% had average knowledge regarding first aid management. In the post-test, 73.33% of students had average knowledge and 26.67% had good knowledge, while none had poor knowledge. The calculated t-value (4.078) was significant at the 0.05 level, indicating that the information booklet effectively improved students' knowledge regarding first aid management.

Conclusion: The study concluded that the information booklet was effective in enhancing the knowledge of high school students regarding first aid management and can be used as an educational tool to improve awareness and emergency response skills among students.

Index Terms—First aid management, information booklet, knowledge, high school students, effectiveness, emergency care, and health education

I. INTRODUCTION

First aid is the immediate and temporary care given to a person who has been injured or suddenly becomes ill before professional medical assistance is available. It is a vital component of emergency care and aims to preserve life, prevent the condition from worsening, promote recovery, and minimize complications. First aid measures include managing bleeding, burns, fractures, choking, poisoning, drowning, bites, fainting, and breathing difficulties. Timely and appropriate first aid can significantly reduce morbidity and mortality associated with accidents and emergencies.

Children and adolescents are among the most vulnerable groups for accidental injuries because of their active lifestyle, curiosity, and participation in sports and outdoor activities. School students spend a considerable amount of time in educational institutions where injuries and emergencies may occur during classroom activities, sports events, laboratory sessions, or recreational activities. Therefore, knowledge of first aid among students is essential for ensuring immediate and effective responses to emergencies.

According to the World Health Organization (WHO), injuries account for nearly 950,000 deaths among children worldwide every year. In India, accidental injuries continue to be a major public health concern. Road traffic accidents, falls, burns, drowning, and poisoning contribute significantly to childhood morbidity and mortality. The first few minutes

following an injury are crucial, and appropriate first aid can prevent complications, disability, and even death.

First aid education empowers students with the confidence and skills required to manage emergencies effectively. It promotes safety awareness, develops a sense of responsibility, and encourages positive health behaviors. Educational strategies such as information booklets are simple, cost-effective, and useful methods for imparting knowledge. Information booklets provide scientifically accurate information in an easy-to-understand format and can be referred to repeatedly by students. Therefore, providing an information booklet on first aid management may improve the knowledge and preparedness of high school students in dealing with emergency situations.

II. NEED FOR THE STUDY

Accidents and injuries are common occurrences among school-going children and adolescents. Many of these incidents occur during sports, physical activities, and routine daily tasks. Although emergency medical services are available, immediate first aid provided at the scene of an accident is often critical in determining the outcome. Lack of knowledge regarding first aid can result in delayed treatment, increased complications, and poor health outcomes.

The World Health Organization reports that nearly 950,000 children die every year due to injuries. The National Crime Records Bureau has reported that a significant proportion of injury-related deaths occur among children and adolescents. Research studies have shown that many students, teachers, and community members possess inadequate knowledge regarding basic first aid measures. This lack of knowledge can hinder timely and appropriate responses during emergencies.

School students represent an important target group for first aid education because they are likely to encounter emergency situations both within and outside the school environment. Training students in first aid management can help create safer school communities and increase their confidence in handling emergencies. Furthermore, educated students can disseminate first aid knowledge to family members and peers, thereby benefiting the wider community.

Information booklets are effective educational tools that can improve awareness and understanding regarding health-related topics. They provide structured information, can be used repeatedly for self-learning, and are economical to distribute. The investigator observed that many high school students had inadequate knowledge regarding first aid management. Therefore, there was a need to assess their existing knowledge and evaluate the effectiveness of an information booklet in improving their understanding of first aid management. The findings of the study may contribute to the development of educational programs aimed at enhancing emergency preparedness among school students.

III. OBJECTIVES OF THE STUDY

1. To assess the pre-test knowledge score regarding first aid management among high school students in selected schools of Jabalpur.
2. To assess the post-test knowledge score regarding first aid management among high school students in selected schools of Jabalpur.
3. To assess the effectiveness of the information booklet regarding first aid management among high school students in selected schools of Jabalpur.
4. To find out the association between pre-test knowledge scores and selected demographic variables regarding first aid management among high school students in selected schools of Jabalpur.

Hypotheses

H₁: There will be a significant difference between the mean pre-test and post-test knowledge scores regarding first aid management among high school students in selected schools of Jabalpur.

H₂: There will be a significant association between the pre-test knowledge scores and selected demographic variables among high school students regarding first aid management.

Assumptions

1. High school students may have inadequate knowledge regarding first aid management.

2. The information booklet may improve the knowledge of high school students regarding first aid management.
3. Students will actively participate in the study and provide honest responses.
4. Increased knowledge through educational intervention may enhance students' ability to respond effectively during emergencies.

Operational Definitions

Assess: Assess refers to measuring the knowledge level of high school students regarding first aid management using a structured knowledge questionnaire.

Effectiveness: Effectiveness refers to the extent to which the information booklet improves the knowledge scores of students regarding first aid management as measured by the difference between pre-test and post-test scores.

Information Booklet: An information booklet is a structured educational material containing relevant information about first aid management, presented in an easy-to-understand and visually attractive format.

First Aid Management: First aid management refers to the immediate medical care and treatment provided to a person suffering from injury or sudden illness before professional medical help arrives. For this study, it includes accidents, drowning, foreign body obstruction, bites, burns, wounds, fainting, and breathing difficulties.

School: School refers to the selected Government Higher Secondary School of Panagar, Jabalpur, where the study was conducted.

High School Students: High school students refer to students studying in 11th and 12th standards in the selected school.

Delimitations

1. The study was limited to students studying in 11th and 12th standards.
2. The study was conducted only in a selected Government Higher Secondary School of Panagar, Jabalpur.
3. The sample size was restricted to 60 students.
4. The study focused only on knowledge regarding first aid management and not on practical skills.

IV. MATERIALS AND METHODS

1. Research Approach:

A quantitative research approach was adopted for the study.

2. Research Design:

A pre-experimental one-group pre-test and post-test design was used.

3. Research Setting:

The study was conducted in a selected Government Higher Secondary School, Panagar, Jabalpur.

4. Population:

The target population comprised high school students studying in 11th and 12th standards.

5. Sample Size:

A total of 60 students participated in the study.

6. Sampling Technique:

Non-probability convenient sampling technique was used to select the participants.

7. Research Tool:

A structured knowledge questionnaire and demographic data sheet were used to assess students' knowledge regarding first aid management.

8. Tool Description

The data collection tool consisted of two sections:

Section A: Demographic Variables

This section included questions related to the demographic characteristics of the students such as:

- Age
- Gender
- Class (11th/12th)
- Residence (Rural/Urban)
- Previous knowledge regarding first aid
- Source of information regarding first aid

Section B: Structured Knowledge Questionnaire

A structured multiple-choice questionnaire was developed by the investigator to assess the knowledge of high school students regarding first aid management. The questionnaire covered:

- General concepts of first aid
- Wound management

- Burns
- Fractures
- Drowning
- Foreign body
- Bites and stings
- Fainting
- Breathing difficulties
- Poisoning and other emergencies

9. Scoring Procedure

Each correct answer was awarded one mark (1) and each incorrect answer was given zero mark (0).

- Correct answer = 1 mark
- Incorrect answer = 0 mark

The total score was calculated by summing all correct responses.

10. Interpretation of Knowledge Score

Knowledge Level	Percentage Score
Poor Knowledge	0–50%
Average Knowledge	51–75%
Good Knowledge	76–100%

After conducting the pre-test, an information booklet regarding first aid management was distributed to the students.

11. Pilot study

A pilot study was conducted to assess the feasibility and practicability of the research design, data collection tools, and methodology. The pilot study was carried out among 10 high school students studying in 11th and 12th standards from a school other than the one selected for the main study. The participants were selected using a convenient sampling technique.

A pre-test was conducted using the structured knowledge questionnaire to assess the students' existing knowledge regarding first aid management. After the pre-test, the information booklet was distributed to the students. A post-test was conducted after a specified period using the same questionnaire. The findings of the pilot study revealed that the tool was reliable, understandable, and suitable for data collection. The study was found to be feasible, and no major modifications were required in the methodology. Therefore, the investigator proceeded with the main study.

12. Main study

The main study was conducted in a selected Government Higher Secondary School of Panagar, Jabalpur. A total of 60 students studying in 11th and 12th standards were selected by using a non-probability convenient sampling technique.

Prior permission was obtained from the concerned authorities, and informed consent was taken from the participants. The purpose of the study was explained to the students, and confidentiality of information was assured.

The study was conducted in three phases:

Phase I: Pre-test

A structured knowledge questionnaire was administered to assess the existing knowledge of students regarding first aid management.

Phase II: Intervention

Immediately after the pre-test, the information booklet regarding first aid management was distributed to the students. The booklet contained information related to accidents, wounds, burns, drowning, bites, breathing difficulties, fainting, and other common emergencies.

Phase III: Post-test

After two weeks, a post-test was conducted using the same structured knowledge questionnaire to assess the effectiveness of the information booklet.

The collected data were organized, tabulated, and analyzed using descriptive and inferential statistics. The effectiveness of the information booklet was determined by comparing the pre-test and post-test knowledge scores of the students.

13. Data Collection Procedure:

Data were collected over a period of two weeks. A pre-test was conducted using the structured questionnaire, followed by distribution of the information booklet. After an interval of two weeks, a post-test was conducted using the same questionnaire to assess the effectiveness of the booklet.

14. Data Analysis:

The collected data were organized, tabulated, and analyzed using descriptive and inferential statistics to determine the effectiveness of the information booklet and the association between knowledge scores and demographic variables.

V. RESULT

The present study was conducted to assess the effectiveness of an information booklet regarding first aid management among high school students in a selected school of Jabalpur. A total of 60 students studying in 11th and 12th standards participated in the study. The data were collected using a structured knowledge questionnaire before and after the administration of the information booklet.

Results Related to Socio-Demographic Variables

1. Regarding age, the majority of students 22 (36.6%) were 17 years old, followed by 21 (35.4%) who were 18 years old, and 17 (28%) who were 15–16 years old.
2. With respect to class of study, 39 (65%) students were studying in Class 12, whereas 21 (35%) were studying in Class 11. No student belonged to Class 10.
3. Regarding the educational status of fathers, the majority 29 (48.4%) had completed higher secondary education, followed by 15 (25%) graduates, 10 (16.6%) with high school education, and 6 (10%) postgraduates.
4. Concerning the educational status of mothers, the majority 27 (45%) had completed higher secondary education, followed by 21 (35%) with high school education, 11 (18.4%) graduates, and 1 (1.6%) postgraduate.
5. With regard to family type, the majority of students 32 (53.4%) belonged to joint families, while 28 (46.6%) belonged to single (nuclear) families.
6. Regarding the occupation of fathers, the majority 23 (38.3%) were engaged in other occupations, followed by 17 (28.4%) in the private sector, 11 (18.3%) in government service, and 9 (15%) in business.
7. Regarding the occupation of mothers, the majority 43 (71.6%) were housewives, followed by 8 (13.4%) involved in business, 7 (11.6%) employed in the private sector, and 2 (3.4%) employed in the government sector.
8. Concerning nutritional status, the majority 41 (68.4%) were vegetarians, followed by 12 (20%) non-vegetarians and 7 (11.6%) egg-eaters.
9. Regarding the source of information about first aid management, the majority 15 (44.4%) obtained information from books, followed by 10 (29.4%)

from newspapers, 5 (14.8%) from social media, and 4 (11.4%) from relatives.

10. With respect to previous knowledge regarding first aid management, the majority 34 (56.6%) reported having previous knowledge, whereas 26 (43.4%) reported no previous knowledge.

Distribution of Students According to Pre-test Knowledge Scores

The pre-test was conducted to assess the existing knowledge of high school students regarding first aid management. The findings revealed that a majority of the students had inadequate knowledge before the intervention. Out of 60 students, 39 (65%) had poor knowledge and 21 (35%) had average knowledge regarding first aid management. None of the students had good knowledge in the pre-test. These findings indicate that students lacked adequate knowledge regarding emergency management and first aid practices before receiving the information booklet.

Distribution of Students According to Post-test Knowledge Scores

Following the administration of the information booklet, a post-test was conducted to assess the effectiveness of the educational intervention. The findings demonstrated a considerable improvement in the knowledge level of the students. Out of 60 students, 44 (73.33%) achieved average knowledge scores and 16 (26.67%) achieved good knowledge scores. No student remained in the poor knowledge category after the intervention. This improvement clearly indicates that the information booklet enhanced students' understanding of first aid management.

Comparison of Pre-test and Post-test Knowledge Scores

A comparison of pre-test and post-test scores revealed a significant increase in the knowledge level of students regarding first aid management. The post-test scores were higher than the pre-test scores, indicating that students gained substantial knowledge after reading the information booklet. The educational material helped students understand important aspects of first aid such as wound care, burns, fractures, drowning, foreign body management, bites, fainting, poisoning, and breathing difficulties.

Effectiveness of the Information Booklet

The effectiveness of the information booklet was determined by comparing the mean pre-test and post-test knowledge scores using statistical analysis. The calculated t-value was 4.078, which was statistically significant at the 0.05 level of significance. This result indicates that the improvement in knowledge was not due to chance and that the information booklet was effective in increasing students' knowledge regarding first aid management. Therefore, the research hypothesis (H_1) stating that there would be a significant difference between pre-test and post-test knowledge scores was accepted.

Association Between Knowledge Scores and Demographic Variables

The study also examined the association between pre-test knowledge scores and selected demographic variables. Statistical analysis was carried out to determine whether factors such as age, gender, educational level, residence, and previous exposure to first aid information influenced the students' knowledge. The findings helped identify demographic characteristics associated with variations in knowledge levels regarding first aid management.

VI. CONCLUSION

The present study was conducted to assess the effectiveness of an information booklet regarding first aid management among high school students in a selected school of Jabalpur. The findings of the study revealed that the students had inadequate knowledge regarding first aid management before the intervention. After the administration of the information booklet, there was a significant improvement in the knowledge scores of the students. The comparison of pre-test and post-test scores demonstrated that the information booklet was effective in enhancing students' knowledge regarding first aid management. The calculated t-value was statistically significant, indicating that the educational intervention had a positive impact on the participants. The study also highlighted the importance of providing first aid education to school students, as they are vulnerable to accidents and emergencies in their daily lives.

Therefore, it can be concluded that the information booklet is a simple, economical, and effective

educational strategy for improving knowledge regarding first aid management among high school students. The study recommends that similar educational programmes be conducted regularly in schools to promote awareness, preparedness, and prompt response during emergency situations.

VII. IMPLICATION

Nursing Practice

- Conduct regular first aid awareness programs in schools.
- Improve students' emergency response skills.
- Promote school health services through health education.
- Encourage nurses to provide first aid training to students.

Nursing Education

- Include first aid management in school health education.
- Develop educational materials such as booklets and pamphlets.
- Organize workshops and demonstrations on first aid.
- Strengthen students' knowledge regarding emergency care.

Nursing Administration

- Plan and implement school-based first aid programs.
- Ensure availability of first aid educational resources.
- Coordinate with schools for regular training sessions.
- Encourage school health policies related to first aid.

Nursing Research

- Replicate the study with a larger sample size.
- Conduct similar studies in different settings.
- Compare different teaching methods for first aid education.
- Explore long-term retention of first aid knowledge.

RECOMMENDATIONS

1. Similar studies can be conducted on a larger sample size for better generalization of findings.
2. A comparative study can be undertaken between rural and urban school students regarding knowledge of first aid management.
3. Similar studies can be conducted in different educational settings and geographical areas.
4. Experimental studies can be conducted using different teaching strategies such as planned teaching programmes, video-assisted teaching, and demonstrations.
5. Follow-up studies can be carried out to assess long-term retention of knowledge regarding first aid management.
6. Studies can be conducted to evaluate the effectiveness of first aid training on students' practical skills.
7. First aid education programmes should be incorporated into school health services.
8. Similar studies can be conducted among teachers, parents, and community members.

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